FORUM™ 100
PBX 1/8 with CLIP & CNIP

USER MANUAL

Dear Customer,

Thank you for choosing the FORUM™ 100 PBX, a system designed for both the home and the office.
The FORUM™ 100 manages 1 external and 8 internal lines: these can be connected to a fixed or cordless analogue telephone, a fax, an answer phone or an intercom interface. Dialling can be in MF mode (Multi-frequency) or pulse mode (DC).
The FORUM™ 100 PBX can simultaneously manage 1 external and 2 internal calls.
It offers internal and external caller number display.
It has on-hold music.
The system also has a clock interface with alarm clock facility, and visualisation of telephone traffic via a PC.

STATEMENT OF COMPLIANCE

Industrie DIAL FACE S.p.A., V.le Premuda 38/A - 20129 Milano (MI) – ITALY, declares that the FORUM™ 100 equipment complies with Directive 1999/5/CE of the European Parliament and Council dated 9 March 1999 in relation to radio equipment and telecommunications terminals (R&TTE) and the certification of reciprocal compliance.
The FORUM™ 100 complies EN50022 – EN55024 specifications about EMC and EN41003 – EN60950 specifications about safety. The system's compliance with the above specifications is demonstrated by the CE mark, affixed to each piece of equipment.

USE OF THE FORUM™ 100 PBX

This product has been designed for connection to the Belgacom analogue public switched telephone network.
The use of multifrequency (MF) dialling telephones will guarantee optimal functioning of the FORUM™ 100.

LIST OF FUNCTIONS

1. STANDARD FUNCTIONS

Internal calling and Group calling
Internal groups
General access to external telephone line
Immediate access to external line on picking up handset
External line on-hold mode with music
External line call-back and transfer to a free extension
Answering an internal call while in communication on the external line

2. ADDITIONAL FUNCTIONS

Caller Line Identification and Presentation (CLIP)
Automatic call-back when number busy
Adding a third caller
Access to postdialling services
2nd call function
Do not disturb function (Activate/Deactivate ringer)
Taking external calls
Call transfer
Night Function
Dialling lock
Clearing dialling lock using password
Abbreviated dial numbers
Authorising/Locking external calls
Emergency numbers

3. SPECIAL FUNCTIONS

"Babyphone" function
Hot Line with programmable voice messaging
Night mode with welcome message and FAX-SWITCHING
Direct Selection (DISA) and FAX-SWITCHING with programmable voice guide
Call pick-up when in answer phone mode
Notification of message received on answer phone via external line
Compatibility with an intercom with programmable access

4. CLOCK INTERFACE

Programming
Connecting to a PC
Detailed report of incoming and outgoing calls
Alarm clock function

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- 1 FORUM™ 100 PBX
- 1 electrical power supply unit (220/230V)
- Screws for wall mounting (4 x 5 mm)
- 1 network connection cable (RJ11)
- 1 PC cable
- User manual and warranty (FR/NL)
- A quick-reference manual (FR/NL)

GENERAL INFORMATION (See Fig. A)

The PBX and power supply unit must be mounted on a wall, close to the PSTN access point and an electrical power point (220/230 V), by fixing them with the screws provided.
The equipment must not be installed near any electromagnetic source (photocopiers, transmit antennas, electrical cabinets, transformers, etc.).
The enclosed template is provided to help drill the screw holes in the correct positions.

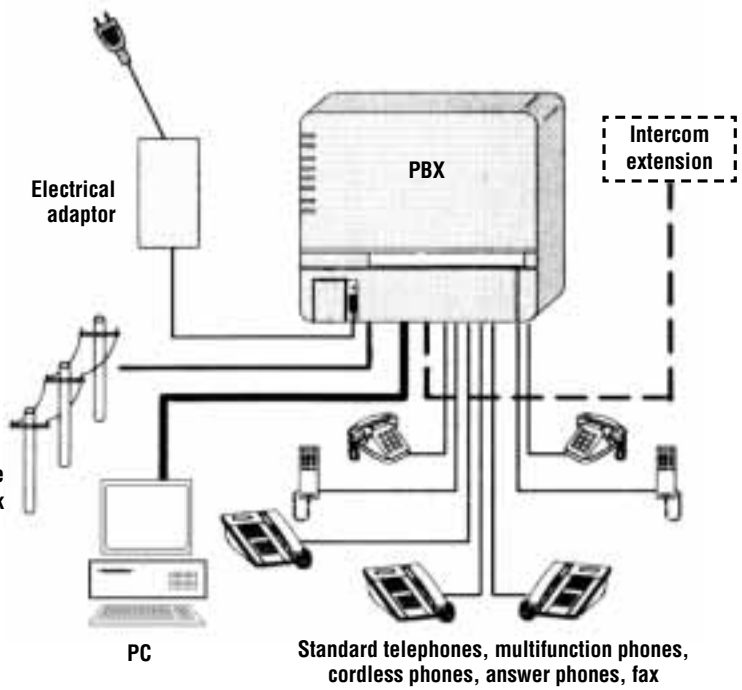


Fig. A

The PBX connectors can be accessed by sliding the cover on the back of the PBX to the left (Fig. B).

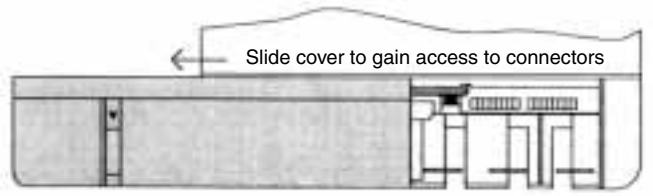


Fig. B

PBX COMPONENTS

The fully-equipped PBX is composed of:

- 1 Motherboard, incorporating the standard functions, external line, extension and electrical power supply connections. It includes 1 jumper (S1) for specific configuration.
- 1 Auxiliary board: to support the alarm clock function and telephone traffic display.

Fig. 1 displays the following components:

- Motherboard
- Auxiliary board for alarm clock and telephone traffic
- Network connectors (Fig. 1.2)
- PC connection (RS 232)
- Connector plugs for internal telephone extensions 1-8 (Fig. 1.1)

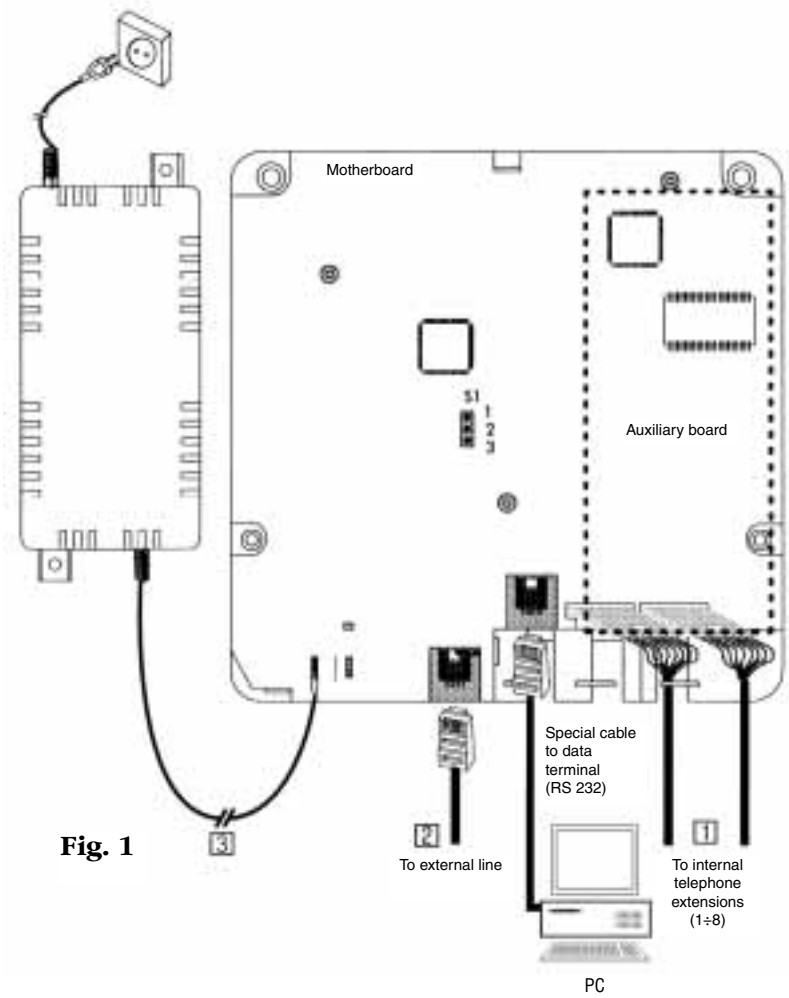


Fig. 1

CONNECTIONS

Components should be connected in the following order:

- internal lines (Fig. 1.1)
- external line (Fig. 1.2)
- electrical power supply (Fig. 1.3)

JUMPERS

The S1 jumper corresponds to the equipment password.
The jumper's default position (2-3) is the normal operating mode. Position 1-2 resets the password (factory password) as explained in the chapter "Troubleshooting".

The PBX box must be opened in order to change the jumper's default position. It is imperative that you disconnect the equipment from the power supply and external telephone line before opening the box.

INTERNAL LINES

Each telephone extension must be connected to the PBX by a pair of cables (0.6 mm in diameter): the cables ends must be bare and pressed into the self-blocking mini-connectors. *Use of a multi-pair cable is not advised for distances of more than 20 m.*
The motherboard has 2 connectors, one for the first 4 internal extensions (numbers 41 to 44) and the other for the additional 4 extensions (numbers 45 to 48).

USE OF MINI-CONNECTORS

Fig. 2 below shows:

1. An additional PC plug
2. A view of the mini-connectors
   a. front part of mini-connectors
   b. cabling
   c. position of internal extensions

To release the cables from the mini-connector, introduce an object with a point into the opposite side to the conductors, on the metallic part above the connector. The connectors are encased at the specified place, with the numbers indicated on the mini-conductors (visible from the front). The cables must be placed behind the protective shields fitted in the back (plastic part) of the connector.

Note:
Extension 41 continues to function (back-up) in the event of any electrical failure because it will be switched in direct connection to the external line.
This feature should be considered when allocating equipment to the various connection points.

Fig. 2

EXTERNAL LINES

The FORUM™ 100 is connected to the external line (Fig. 3) via a cable with an RJ11 connection.

PBX access to the external line is equipped with the standard protection against power surges.

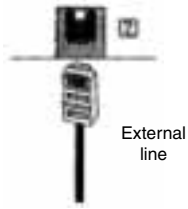


Fig. 3

ELECTRICAL SUPPLY (See Fig. 4)

The PBX is equipped with an external electrical transformer connected via a 4-terminal connector and connection cable to a 230V/50Hz plug. A green light indicates the power is switched on. The transformer plug must be easy to access in case it has to be removed quickly.

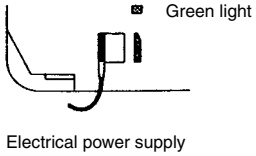


Fig. 4

CHECKING THE INSTALLATION

Test without electrical supply

- Pick up the handset on extension 41. An external dialling tone should be heard.

Test with electrical supply

- Plug in the electrical cable. The green light should come on.
- Pick up the handset on extension 41, check there is a dialling tone and dial 40 (Group call). All telephones connected should ring.
- Pick up the handset on one of the ringing extensions and check you are in communication.
- Hang up and repeat the exercise with each connected extension.
- Dial 0 (access to external line) from extension 41 and check there is a dialling tone.
- Dial an external telephone number and check that the call connects. Ask the person called to dial the t PBX external line number and check that all telephones not engaged are ringing.

GENERAL

The PBX is supplied with the following default configuration:

- access to external line and unrestricted dialling activated for all extensions
- telephone ringer and reception of incoming calls activated for all extensions
- MF (multifrequency) dialling mode on external network
- Dutch language

The internal lines (extensions) are identified by two-figure numbers ranging from 41 to 48. In the event of an electrical power failure, extension 41 is directly connected to the external line. Extension 41 can also be used to change PBX configuration

PROGRAMMING THE SYSTEM

STANDARD AND ADDITIONAL FUNCTIONS

Certain functions can be programmed and personalised from extension 41, using specific parameters. Programming is protected by a 4-figure password.
The table at the end of this manual summarises all programming options possible.

The programming procedure is as follows:

1 – Pick up the handset on extension 41 and wait for the continuous tone.
2 – Dial code **98** followed by the 4-figure programming password (default code: 1234). *The password may be changed by the user but, for the purposes of these instructions, the default password is used.*
3 – Dial the **programming code** corresponding to the function required and any relevant parameters.
4 – Press the **R** key to validate programming.
5 – Wait for 3 short confirmation beeps or a voice message (the busy tone indicates that programming has not been successful).
6 – Repeat steps 3, 4 and 5, without replacing the handset, to program any other function.

All programming may be written manually in the FORUM™ 100 PROGRAMMING TABLE (included with this manual).

1 – PROGRAMMING THE LANGUAGE

The Dutch and French languages can be programmed in the FORUM™ 100. The language is selected using extension 41. Proceed as follows:

Dial **98 1234 84 0**, then press the **R key**, for Dutch
Dial **98 1234 84 1**, then press the **R key**, for French.

The language selected is confirmed by the following message: "Function activated".
By default the PBX is configured for Dutch.
If the language is changed, messages for the DISA, HOT LINE & NIGHT FUNCTION will no longer be available. New messages will have to be recorded each time the language is changed.

2 – CHANGING THE PROGRAMMING PASSWORD (code 90)

The programming password can be changed at any time to protect programming, using the following sequence: **98 MMMM 90 NNNN NNNN R.**
Where **MMMM** is the existing programming password and **NNNN** is the new password. The new password must be keyed in twice so that the system can check it: if the new password is input differently the second time, the request is rejected. The old and new passwords **must** comprise **4** figures.
The default programming password is **1234**.

3 - PROGRAMMING ABBREVIATED DIAL NUMBERS (codes 00 to 39)

The system allows 40 telephone numbers to be programmed in to a phone directory, each one corresponding to a two-figure address. Dial the password, followed by the abbreviated address **nn** (00 to 39), and then key in the corresponding telephone number (maximum 30 figures) to memorise the number in the phone directory. To insert a pause for an intermediate tone (or a 10-second pause without a tone) press the **#** key twice (for 2 seconds).

Dial **98 1234 nn yyyyyyyyyy… R** to memorise a number in the telephone directory.

For example: ***98 1234 00 021234567 R*** *programs the telephone number 021234567 with the abbreviated dial code 00: if no number for yyyy…. is programmed in, the abbreviated dial code memorised is erased.*

The abbreviated dial codes 36, 37, 38 and 39 are also used for the "Hot Line" function.
Code 30 is used for the "Message received on answer phone" function.
The abbreviated dial codes table can be erased by dialling: **98 1234 49 R**.
To check abbreviated number **nn** in the table, dial **98 1234 96 nn R**.
A voice message gives the full sequence of figures in the telephone number corresponding to the abbreviated **nn** address.
Note: Abbreviated dial codes are not accessible to extensions whose outgoing calls are deactivated.

To use an abbreviated dial code, pick up the receiver, check the PBX dialling tone (continuous), and then press **3** followed by the **nn** address of the number you wish to call. A beep will be heard, indicating that the number is ringing.
Note: if immediate access to the external network is activated, pick up the receiver and when the PBX tone for an external line (continuous) is heard, press the ***R*** *key. Then dial* ***3*** *followed by the relevant abbreviated* ***nn*** *address.*

4 - PROGRAMMING EXTENSIONS (code 4d x…)
A number of functions (see Table 1) can be programmed for each extension (41 to 48). After dialling access code (**98**) and entering the password, dial the number of the extension to be programmed (e.g. **44**), followed by a code (**x**) or sequence of codes (**x x x …**) corresponding to the functions to be activated: **98 1234 4d x R**.

TABLE 1

X	Functions	Default value
0	Adding a third caller	No
1	Line fully deactivated	Fully activated
3	Line activated for incoming calls only	Fully activated
5	Night function	No
7	Locking of interzonal calls (see Table 3)	No
8	Locking of international (00) calls	No
9	Resetting default values	
*	External line directly accessible by lifting handset	No

For example, the sequence 98 1234 44 3 R indicates that extension 4 is able to receive incoming calls only.

- Extensions that have been fully or partly deactivated (x = 1, 3) do not have access to abbreviated dialling. ***They can still call the following emergency numbers: 100, 101, 112 and other emergency numbers.***
- Extensions whose calls are locked (x = 7, 8) can still access abbreviated dialling.

Note: Several extensions can be programmed at the same time. For example, to lock interzonal calls (see Table 3) and 00 international calls on extensions 44 and 46, the following should programmed: ***98 1234 44 7 8 R 46 7 8 R****.*

5 – INTERCOM FUNCTION

A BELGACOM ACCESS DOORPHONE can be connected to any FORUM™ 100 internal line (except extension 41) enabling each extension to access the outside intercom extension and open the door remotely, if it is equipped with an electric opening device.
To assign an extension the intercom, from extension 41 dial **98 1234 4* d...d R** where **d** represents the number of one or several extensions 2…8.
The external line cannot not be transferred to an intercom extension. The CLIP function does not function on an intercom. External call ringing is deactivated by default and cannot be reactivated by the user.
The intercom cannot be assigned to an extension that is already in a call group.
To check which extension is assigned to the intercom, dial **98 1234 4* 0 R** from extension 41.
To cancel assignment of the intercom to an extension, dial **98 1234 4* 9 R** from extension 41.

Note: An intercom extension can only be connected to the external line for making outgoing calls. No other functions are possible.

6 – DEACTIVATING THE BEEPS DURING COMMUNICATION (code 58d)

Each extension can stop the phone from beeping to announce, for example, an incoming call on the external line. This is useful when a modem is connected to the extension, because the beeps may interfere with modem reception.
Code **58d** deactivates the beeps. Press: **98 1234 58 d R**.

	d	**Signifying**
58	**1...8**	Beeps are deactivated on extension 41…48
	9	Beeps are reset on all extensions

Note: several extensions can be programmed simultaneously, e.g.: ***98 1234 58 12345678 R***

7 – PROGRAMMING THE EXTERNAL LINE (code 61x)

Certain functions can be programmed on the external line (see Table 2). After dialling access code (**98**) and the programming password (default code: **1234**), dial **61** followed by (**x**) or a sequence of several (**xx...**) depending on the functions to be activated: **98 1234 61 xx... R**.

TABLE 2

X	**Functions**	**Default value**
1	Pulse-mode dialling (1)	M F (multifrequency) dialling
2	Direct Selection function (DISA/FAX Communication) (2)	Deactivated
3	Night Mode Welcome Message (3)	Deactivated
4	Line authorised for incoming calls only	Activated
6	Abbreviated dial numbers deactivated	Activated
7	CLIP function deactivated	Activated
9	Resetting of default values	

Note:
(1) This programming implies that the telephones connected to the internal lines are pulse-mode, because multifrequency (MF) equipment cannot dial in pulse mode on the external line (they can, however, dial external numbers using abbreviated number codes).
*(2) The Direct Selection function must be activated using code **911 R**.*
*(3) The Night Mode Welcome Message needs a recorded message and the Night Mode to be activated, using code **901 R**.*

8 – CALLER LINE IDENTIFICATION AND PRESENTATION (CLIP)

When the CLIP function is activated, the FORUM™ 100 operates in "transparent" mode and displays the phone number of the caller. Displaying the internal or external caller's number is configured by default.

8.1 – Internal and external caller number display

The CLIP function can be activated for each extension separately from extension 41, by dialling **98 1234 56 d R**, as in the table below:

	d	**Signifying**
56	**1…8**	CLIP authorised extension 41…48
	9	No authorised extension

Note:
- to deactivate a particular extension, first deactivate all extensions and then reactivate the other extensions.
*- several extensions can be programmed simultaneously, by dialling **98 1234 56 12345678 R**.*
*For example: if extensions **44** and **45** need to be deactivated, dial **98 1234 56 9 123678 R** from extension **41**.*

When an external call is received, and all extensions are authorised to receive these calls and have the ringer activated, the caller's number is displayed on all phone extensions.
Note: When the DISA function is activated, caller number identification cannot be displayed. This also applies to phones that are engaged on the first ring (i.e. if they are already in communication with another telephone) and those whose ringer is deactivated.

8.2 – Deactivation of the CLIP function on the external line

The FORUM™ 100 is configured by default to display incoming caller number identification on the external line. To deactivate this function, dial **98 1234 617 R** from extension 41.
Note: Internal caller number display is still available.

8.3 – Internal caller number identification display

Most telephones connected to the FORUM™ 100 can display the identification of an internal caller. To activate this function, dial **98 1234 54 d R** from extension 41, as in the table below:

	d	**Signifying**
54	**1…8**	CLIP authorised extension 41…48
	9	No authorised extension

Note:
- to deactivate this function on an extension, deactivate all extensions, then reactivate the other extensions.
*- several extensions can be activated at the same time, e.g. **98 1234 54 12345678 R**.*

*For example: if this function needs to be deactivated on extensions **47** and **48**, dial **98 1234 54 9 123456 R**.*

8.4 – Caller name identification (CNIP) function

The CNIP function allows users with a suitable telephone to view the caller's name. These phones can be used by all extensions on the FORUM™ 100 PBX: this function is activated on the external line by default.
If the CLIP function is activated **>** the CNIP function is activated.
If the CLIP function is deactivated **>** the CNIP function is deactivated.

9 – CALL MANAGEMENT

After picking up the handset, the number must be dialled within 10 seconds. If not, a fault tone will be heard. Replace the receiver or press the R key before redialling the number.

9.1 – Internal calls

9.1.1 – Internal calls and group calls

Pick up the handset, check there is a dialling tone and dial the extension number you wish to call (from **41** to **48**) or the group call code (**40**). For group calls, all extensions ring (except the extension programmed to function for intercom access). The first person to answer is in communication with the calling extension.
A maximum of two internal conversations are possible at any time. Any call from an additional extension will hear a fault tone.

9.1.2 – Programming groups (6 # g)

Each extension can be configured to be in a user group (1 to 6 groups max.). Each extension can be in one or more groups.
Each group is identified by a **<6g>** sequence where **g** corresponds to the group number (1 to 6).
If no group is configured or if no extension in the group is free, after pressing **6g** a tone will be emitted.

To configure a group, pick up the handset on extension 41 and dial **98 1234 6# g d…d R.**
Where: **6#** is the programming access code for groups
6 is the number of the group (1…6)
d…d are the extension numbers in the group (1…8)

The groups are empty by default.
A group **g** can be erased by pressing **98 1234 6# g 9 R**.
The procedure for checking the composition of a group is: **98 1234 6#g 0 R**.
An extension cannot be assigned to a group if it is already assigned to the intercom function.

9.1.3 – Immediate internal call transfer (24d R)

All internal calls to an extension can be transferred to any other extension.
Activation. To activate the transfer to extension 4d (41…48), pick up the handset and dial code **24d R** (d=1…8). A voice message confirms the call transfer. When the call transfer is activated, the tone when picking up the handset is intermittent.
Verification. To check that the transfer has been activated successfully, dial **240 R**. A voice message will give the transfer status.
Deactivation. To deactivate the transfer, dial **88 R**.

9.2 – External calls

9.2.1 – Incoming external calls

When the PBX receives a call, all telephones with the ringer activated will ring. Telephones that are busy receive a notifying beep until the call is taken.
Note: This beep can be deactivated by programming.

To answer an external call, all you do is pick up the receiver. The ringer on all telephones can only be deactivated for incoming external calls, **except extension 41.**

9.2.1.1 – "Do not disturb" function (Activation/Deactivation of the ringer)

The ringer on internal extensions can be activated or deactivated for external calls. To activate or deactivate the ringer function on external calls, pick up the handset and dial one of the two-figure codes in the table below, then press the **R** key.

80 R	Ringer deactivated on external calls
81 R	Ringer activated on external calls

Note: Deactivation as described above is impossible when the Night Function is on.

9.2.1.2 – Answering an external call when the ringer is deactivated (key 5)

When the ringer is deactivated, external calls can be answered by picking up the handset and pressing **5** after the tone: communication with the external caller is then established.

9.2.2 – General access to the external line (0)

Pick up the handset, dial **0** after hearing the tone, wait for the external line tone and dial the desired number.
If there is no external tone after pressing **0**, the system may be disconnected. Check the installation and try again.
If the external line is busy, the busy tone will be heard. If this happens, automatic call-back on the external line can be programmed.
If the tone does not stop once the number has been dialled, this may mean that the local network can not handle multifrequency (MF) dialling. The dialling mode must therefore be switched to DC (pulse) mode by programming (see Table 2).

9.2.3 – Immediate access to the external line (upon picking up the handset)

By programming, the external line can be immediately accessed by picking up the handset of any telephone (see chapter "Programming extensions").
This operating mode is useful when a large number of external calls are to be made. An internal call can also be made by pressing the **R** key after picking-up the handset, and then dialling the relevant extension number (41…48) once the dialling tone is audible. The procedure is the same as for dialling an abbreviated number.

Note
If you pick the handset up too soon.
- After replacing the handset at the end of an external call, the external line is not available for about 3 seconds and remains available for any incoming calls. Trying to access an external line before this time will result in an engaged tone.
- If the time interval between hanging up after an external call and picking up the handset of the same phone is too short, the PBX will consider the replacement of the handset as a request for call-holding (equivalent to a calibrated opening obtained by pressing the R key) and the call remains available on the line like any call on hold.

9.2.4 – Transfer of external calls

To transfer external calls, proceed as follows:

- Put the external call on hold
- Call the extension you wish to transfer the call to
- Transfer the call.

9.2.4.1 – Putting an external call on hold (R or 2)

An external call can be put on hold at any time during the conversation.
Call-holding is activated in various ways:

- ***For telephones with an R key:*** press the R key to put the external call on hold (press this key again to return to the caller).
- ***For pulse-mode telephones without an R key:*** dial **2** to put the external call on hold (dial **72** to return to the caller). You must wait at least 8 seconds before dialling 72.

Note: if, after putting an external call on hold, the handset is replaced without transferring the call, the telephone will ring again with a special ring tone, after 4 or 5 seconds. When the handset is picked up, communication with the caller can continue.

If the ring warning that a call is on-hold is not answered, the line will become free after 3 minutes. The caller on hold hears music.

9.2.4.2 – Calling the extension to which the external call is to be transferred

After putting the call on hold, dial the relevant internal extension number:

- ***if the called extension answers,*** the communication is busy while the call is on hold. Press the **R** key to retrieve the call with the external caller.
- ***If the called extension does not answer or is engaged,*** press the **R** key: the continuous tone will be heard, and then press the **R** key again to return to the external caller, or dial another internal extension number.

Note: if the internal extension remains busy for more than 25 seconds, a warning beep will sound as a reminder that an external call is on hold. This beep can be deactivated by programming.

9.2.4.3 – Call transfer

- If the extension called answers, announce the call transfer and put the handset down. The call will be transferred immediately.
- If the handset is replaced before the extension called answers, the extension will ring for 25 seconds. If it is not answered after this time, all extensions with the ringer activated will ring.

Note:

- *During communication, the called extension can decide to accept the call on hold by pressing the **R** key.*
- *Incoming calls can be transferred to any extension, regardless of the restrictions on external line access.*
- *No calls can be transferred to an engaged telephone or to the intercom.*

9.2.5 – Locking outgoing external calls

Outgoing external calls can be restricted by blocking long-distance calls or calls to particular network services.
In addition, the Clock Interface (explained later), can provide a report of telephone traffic via the PC connection.
Access to the international dialling code 00 and/or pre-programmed numbers can be barred on each extension by the user (in special table).

Note: Locking calls on a specific telephone still allows access to all the abbreviated dial codes.

9.2.5.1 – Programming authorised/locked dial codes (code 5 x nn yyyy)

A table can be produced containing 10 dialling codes (maximum of 4 figures – **yyyy**) identified as being locked or authorised codes. Dialling the code 0, for example, can be locked (to bar interzonal and international calls) while authorising the use of code 03.
Locked dial codes must be keyed in using code x = 0, and authorised dial codes with code x = 1.
The variable **nn** is represented in Table 3 (from 00 to 09).

98 1234 5 0 nn $y_a y_a y_a y_a$ R to lock the $y_a y_a y_a y_a$ dialling code
98 1234 5 1 nn $y_b y_b y_b y_b$ R to authorise the $y_b y_b y_b y_b$ dialling code

TABLE 3

X (0 or 1)	nn	Dialling codes	X (0 or 1)	nn	Dialling codes
	00			**05**	
	01			**06**	
	02			**07**	
	03			**08**	
	04			**09**	

E.g.: to lock all dialling using 0, dial 98 1234 5 0 00 0 R, but to authorise dialling using 03 and 02, (without replacing the handset) dial 5 1 01 03 R 5 1 02 02 R.

Note: locking the programmed international calls in the table does not apply to extensions already programmed with locked dialling (see Table 1).

These authorised/locked dialling codes can be erased by dialling **98 1234 59 R**.

Note: extensions with programmed restrictions (in table) can still use abbreviated dialling.

9.2.5.2 – Clearing call-locking

Call locking can be cleared by pressing **70** followed by the programming password (**1234** default) and then pressing the **R** key. Once the tone is heard, dial the required number. Locking is reactivated once the handset is replaced.

Deactivation. Call locking must be reprogrammed on each extension, or the table must be completely erased using code **59R**.

9.2.6 – Restricting outgoing calls and emergency numbers

Extensions can be programmed to bar them from accessing the external line (Point 4 "Programming extensions" codes 4d1 or 4d3).

However, any extension that has access to the external line locked can still access the line to dial the following emergency numbers: 100, 101 and 112.

Note: the external line can be accessed by dialling 0 (zero) and then the emergency number.

9.2.7 – Selecting the on-hold music for external calls (codes 63 x)

For calls on hold, either a short melody of 4 notes (tone mode) or music lasting 20 seconds can be selected for the external line.

98 1234 63 1 R to select the 4-note melody.
98 1234 63 0 R to select the 20-second music.

9.3 – Automatic recall (key 9)

When the internal extension called or the external line are busy, automatic recall can be activated: press **9** after hearing the busy tone and hang up. When the called number becomes free, the telephone that activated the recall will automatically ring and must be answered within 10 seconds, otherwise the recall is cancelled. If the telephone activating the call is engaged, the recall rings when the extension is free.

On picking up the receiver of the phone that activated the recall, the number of the phone to be called or the access code to the external line is automatically dialled and the internal or external dialling tone can be heard (the external number can then be dialled).

Each telephone can only activate one automatic recall.

9.4 – Adding a third caller (key 8)

When the extension called is busy calling another extension or an external call, this call may be accessed by dialling **8**.

A beep indicates to the three callers that the third person has joined the call.

If one of the telephones involved in a three-way external call hangs up during the call, the two other callers will remain in communication. If the third caller to join the communication hangs up, the communication between the two initial callers will continue. But, if one of the initial callers hangs up, the communication end for all everyone. This function must be programmed for the extensions requesting the service.

9.5 – Postdialling

This function is required for calling an automatic operator.
Access to this function is different depending on whether the telephone uses MF (multifrequency) or DC (pulse) mode:

- DTMF: dialling is direct.
- Pulse mode: dial 2 and then 72, once the dialling tone is heard, then dial the required number.

Note: the call will be established 8 seconds after the last number has been dialled.

9.6 – Access to special network services

To access the special network services (e.g. call holding, adding a third caller, etc.), instead of just pressing the **R** key, press the **R** key, wait for the continuous tone and then press the **#** key.

For example, instead of pressing R2, used for putting a call on hold, you must press R…#…2 (you should wait about half a second before dialling 2 to get a calibrated open transmission to the external line).

SPECIAL FUNCTIONS

1 – BABYPHONE (49)

You can listen in to a nearby room and, for example, check on a baby.
Pick up the telephone handset in the room to be monitored, press **49** and leave the handset off hook. When this extension is called by another extension, voice communication is established and everything that happens in the room can be heard.

Note: this function is also available from a remote telephone with MF dialling using the "Direct Selection" function, explained below.
Note: this function cannot be activated for extension 41.
N.B.: Any improper or illegal use of the function may be considered as a violation of privacy.

2 – HOT LINE (85 R)

Special programming launches a sequence of 8 call attempts for external numbers and abbreviated-dial numbers using codes 39, 38, 37 and 36. This is done by picking up the handset and waiting (without dialling) for 20 seconds. Each call attempt lasts for 60 seconds, at intervals of 16 seconds.

Note: a continuous tone can be heard for about 10 seconds and then a fault tone (rapid engaged tone) can be heard for a further 10 seconds.

After dialling each number, communication with the person called is established and lasts for 60 seconds: after this time, the beep signals to the caller and the person called that:

- the * key must be pressed to continue the call for a further 60 seconds and to stop the call attempt sequence
- The **#** key must be pressed to stop the call attempt sequence.

Activation. To activate the Hot Line function, press **85 R** on the relevant telephone.
Deactivation. To deactivate this function, press **86 R** from the same telephone.

Hot Line message: during each call attempt, a recorded message lasting a maximum of 30 seconds can be sent by the user twice. This message can be recorded by following the procedure explained in chapter 7 "Recording the main message".
Checking the Hot Line message. To check the message programming, follow the "Recording Main Message" procedure explained in point 7.

Note: The Hot Line message can be recorded by following the same procedure for Recording the Main Message. The recording prevents the Night Function Voice Message Box and any message on the Direct Selection (DISA) from functioning, as explained below.

3 – NIGHT FUNCTION

The ringer on telephone extensions programmed with the Night Function (for external calls) can be activated. When the function is activated, only the phones programmed for the Night Function will ring when an external call is received.
Ringer configuration on the Night Function is separate from the Activation/Deactivation function on day-mode ringing.
Programming and Activation: To activate the Night Function, after programming this function in to the relevant telephones, press **901 R** from any extension.
Deactivation: To deactivate this function, press **900 R** from any extension.

Note: During the Night Function, an automatic answer service can be activated for incoming calls with a message recorded by the user.

4 – DISA FUNCTION (direct incoming call or direct incoming selection)

4.1 – General

Specific programming can allow PBX extensions to receive external calls direct. This function will only work if the DISA function is present and activated on the external line and if the external call is made using an MF-mode telephone (all conditions being satisfied simultaneously).
When the external call is received, the PBX automatically answers and transmits a pre-programmed welcome voice message to the caller as well as a voice guide, consisting of a short melody (tone type) and the message "*please select internal extension or hold*".
At the end of the message, the PBX waits a few seconds to allow the caller to dial a number:
- if the PBX recognises the telephone number dialled, the call is transferred to that number for 20 seconds and, if there is no reply, all the extensions with the ringer activated will ring for a further 20 seconds.

Note:
- if the Babyphone function is active on the extension concerned, the communication will last for 60 seconds.
- if the Immediate Call Transfer function is active, the call will be transferred according to the configuration.

- if the PBX does not recognise any correct or complete number dialled, the call is transferred to all activated extensions for 20 seconds.

Programming the DISA function. Configure the external line correctly (see chapter on "Programming the external line").
The welcome message (4 seconds) can be replaced with the user's own message which must last the same length of time. Follow the procedure explained later in the chapter on "Selection or Recording the DISA welcome message".
The voice guide can be replaced by the user's own message lasting 30 seconds (Direct Selection Message). Follow the procedure explained in the chapter on "Recording the main message".
Lastly, all voice messages can be erased by following the procedure explained in the chapter "Selecting or Recording the DISA welcome message".

Note: Recording the Direct Selection message will erase any Hot Line and Night function messages.

Activation: To activate the Direct Selection function, press **911 R** from any telephone extension.
Deactivation: To deactivate the function, press **910 R** from any extension.

Note: A specific Direct Selection message can be recorded by following the procedure for Main Message Recording. This recording (optional in activating the function) prevents the Night Function Welcome Message and any specific message on the Hot Line from functioning, as explained in this manual.

4.2 – Direct Selection of incoming calls during Night Function
The DISA mode, explained above, can be maintained during the Night mode. The pre-programmed DISA message should, however, be replaced by an appropriate Direct Selection DISA message, also used during day mode.

For example: "You have reached the Dupont Company. Please hold. If you wish to send a fax, please press 48…".

Should caller dialling fail, the call will be transferred to the extensions programmed to answer in night mode and to the answer device (if available).

5 – FAX FUNCTION
All the PBX "**d**" extensions can be assigned to a FAX and programmed to function as a FAX from extension 41. An extension configured as a FAX has direct access to the outside line, on picking up the handset.

5.1 – FAX with DISA function
When the Direct Selection (DISA) function is activated on the external line, and if a "**4d**" extension on the PBX has been configured as a FAX, for any external call (perhaps a fax call), the PBX will automatically add, at the end of the welcome message and voice guide, the message <<"please select internal extension or hold". For FAX, press "4d">>, where "**4d**" represents the number of the FAX extension.
After the message, the PBX checks for several seconds to see whether the call is from a normal telephone caller (incoming MF tone) or from an automatic FAX (special CNG tone). If the FAX signal is identified, the call is automatically transferred to the FAX extension. If no signal is recognised, the call is transferred to all available extensions. If no extension answers, the call will be transferred back to the FAX extension for a further 30 seconds.

5.2 – FAX during the Night mode with Welcome Message activated

When the Night mode is on, the PBX automatically responds to incoming calls and checks for a while if the call is from an automatic FAX (special CNG tone). If the FAXtone is recognised, the call is automatically transferred to the FAX extension. If the tone is not recognised, after repeating the recorded message a second time, and if the telephones are not answered, the call is sent back to the FAX for a further 30 seconds.

Note: in addition to programming the Night Function Welcome Message, the Direct Selection (DISA) function must also be activated.

5.3 – Programming the fax extension (80 4 d)

There are three stages to programming this function:

1) Programming the external line assigned to the FAX
   Press **98 1234 61 2 R** to assign the external line to the "Direct Selection" function. The FAX-switching, Direct Selection and Night mode welcome message functions can be activated simultaneously by dialling **98 1234 61 23 R**.

2) Selecting an extension assigned to the FAX
   To assign the FAX to an extension, dial
   98 1234 80 4d R (where **4d** = extension number 41…48).
   The sequence **98 1234 80 R** cancels this programming.

3) Activating/Deactivating this function
   Activation. To activate the Direct Selection and FAX-switching functions simultaneously, dial **911 R** from any extension.
   Deactivation. To deactivate the function, press **910 R** from any extension.

6 – SELECTING OR RECORDING THE DISA WELCOME MESSAGE

The Direct Selection (symbolised by the acronym DISA = Direct Inward Selection Access), is designed so that the PBX can automatically answer all incoming external calls with a voice message consisting of:

- a short welcome message with a 4-note melody
- the pre-programmed message plus an additional message "*please select internal extension or hold. To send a FAX press 4d*" (if the FAX extension is programmed in).

The 4-note melody may be replaced by a personalised welcome message lasting 4 seconds recorded by the user via the handset:

98 1234 83 1 R activates the recording of the personalised welcome message. After dialling the above number, the voice message "*record after the beep*" indicates that the recording may begin.

98 1234 83 0 R activates playback of the personalised message.

The user can choose at any time to play the melody instead of the personalised welcome message. This is done as follows:

98 1234 65 0 R to select the melody.

98 1234 65 1 R to select the personalised welcome message.

The following sequence allows the user to deactivate all voice messages:

98 1234 691 R deactivates the message

98 1234 690 R reactivates the message.

7 – RECORDING THE MAIN MESSAGE FOR ONE OF THE FOLLOWING FUNCTIONS: Direct Selection, Welcome Message or Hot Line (code 81x)

A "fully recorded" 30-second message can be programmed by using the phone handset to do the programming.

Note: *use of a Main Recorded Message for one of these functions means it cannot be used for other functions. Press the following:*

98 1234 81 1 R to record the message for the Answer phone function

98 1234 81 2 R to record the Direct Selection message (and replace the welcome and pre-programmed information sequence)

98 1234 81 3 R to record the message for the Hot Line function. After dialling this sequence, the voice message "record after the beep" indicates that the recording may begin. This will stop after 30 seconds or on hanging up.

98 1234 81 0 R to listen to the recorded message.

98 1234 81 4 R to check the function the message has been recorded for. The voice messages "Direct call programmed", "Hot Line message programmed" or " Night Mode message programmed" indicate that the function is using the main message.

Note: To erase the message, press the message programming sequence and hang up after the beep. To reset the Direct Selection welcome message and voice guide, record a message for the Hot Line function (even if it is not used).

The Messages/Functions table below shows all the possible combinations for messages in the three functions described earlier:

Direct Selection (DISA)	**HOT LINE**	**NIGHT MODE VOICE BOX MESSAGE**
Pre-programmed message (welcome & voice guide)*	Main recorded message	Not available

Direct Selection (DISA)	**HOT LINE**	**NIGHT MODE VOICE BOX MESSAGE**
Pre-programmed message (welcome & voice guide)*	Service with no message	Main recorded message

Direct Selection (DISA)	**HOT LINE**	**NIGHT MODE VOICE BOX MESSAGE**
Pre-programmed message	Service with no message	Not available

* in all cases, the welcome message can be personalised by the user.

8 – ANSWER PHONE FUNCTION

If an answer phone is connected to a PBX line, certain auxiliary functions of the answer phone are automatically installed.

8.1 – Programming the answer phone (40 4d)

To assign the answer phone to an extension on the system, press **98 1234 40 4d R**.
To cancel this, press **98 1234 40 R**.
This programming may be done using code **921 R,** used for activating the "Message received on answer phone" warning function.

8.2 – Call pick-up

External calls received by the answer phone can be picked up by any other extension and rerouted from the answer phone by pressing **71**, after picking up the receiver.

8.3 – Notification of message received for external calls and the intercom (if activated)

When the "Answer Phone" function is activated, and to ensure that the "Notification of message received" function is activated, a 15-second outgoing message must be recorded on the answer phone. Once this has been done, a sequence of 6 call attempts are made to programmed external numbers using the abbreviated-dial number 30. Each call attempt is done at 10-minute intervals.
During each call, a short pre-programmed voice message is sent 8 times. This is made of the 4-seconds welcome message (also used for the Direct Selection function) and the message "Message received on answer phone".
During the pause between each voice message, the person called can press the **"*"** key on a DTMF telephone to stop the message sequence and send a call to the answer phone extension: after the answer phone has responded to the call, the remote user can then check the message(s) by using the relevant access codes.
To **activate** this function, press **921 R** from any extension.
To **deactivate** this function, press **920 R** from any extension.

Note: The call from abbreviated-dial number 30 is sent 30 seconds after the recording of the last message on the answer phone.

8.4 – Night Function Voice Box message

In Night mode, an automatic answer phone can be activated for incoming calls on a designated external line, playing a 30-second welcome message recorded by the user.

Note: this function requires configuration of the Welcome Message and configuration of the Welcome Message recording, as with the procedure for "Recording Main Message".

98 1234 613 R to programme the Welcome Message on the external line
98 1234 811 R to record the Welcome Message.

The 30-second message is repeated twice before hanging up. While the message is being played, the ringer on the extension set up to receive calls during the Night Function remains active. The incoming call can be picked up, the message being interrupted, and communication with the caller can be established.

Activation/Deactivation. Once programmed, this function is activated and deactivated with the Night Function.

Note: recording the Welcome Message prevents the Hot Line Welcome Message and any other specific message on the Direct Selection (DISA) from functioning.

9 – SELECTING A DEFAULT CONFIGURATION (codes 91 to 94)

Each of these sequences resets a default configuration (A, B, C, D) which may be sufficient enough for the user without the need to make any modifications and facilitate system configuration.

A) 98 1234 91 R: all extensions are authorised to access the external line and no dial-locking is defined.

B) 98 1234 92 R: only extension 41 is authorised to access the external line and no dial-locking is defined.

C) 98 1234 93 R: same as B), with international dial-locking (00) on extensions 42 to 48.

D) 98 1234 94 R: same as A), with deactivation of the ringer on incoming external calls on extensions 42 to 48.

10 – RESETTING THE DEFAULT CONFIGURATION (code 99)

The PBX default configuration parameters (programming when installed) can be reset by dialling **98 1234 99 R**.

This resets the default values for the line functions in Tables 1 and 2, erases Table 3 for locked dialling codes and activates the ringer on all extensions.

PROGRAMMING CODES TABLE

Code	Functions	Default value
84 x	Dutch language x = 0 French language x = 1	0 = Dutch
90 yyyy	Changing the programming password	1234
6#g	Programming groups	
4d x…	Programming extensions (4d = 41…48)	See Table 1
58 d	Deactivation of beeps during communication	Beeps activated
nn yyyyyyy…	Abbreviated-dial numbers (nn = 00…39, 30 figures max.)	Empty
49	Erasing abbreviated-dial numbers	
96 nn	Verifying abbreviated-dial number nn	
61 x…	Programming the external line	See Table 2
5 x nn yyyy	Authorised/locked dialling table (x = 0,1: nn = 00…09)	Empty See Table 3
59	Erasing authorised/locked dialling table	
63 x	On-hold music (music/melody)	0 (music)
65 x	Selecting DISA welcome message (melody/recorded message)	0 (melody)
83 x	DISA welcome message (listen/record)	
69 x	Erase (x = 1) / reset (x = 0) DISA welcome message	0 (activated)
81 x	Main message, 30 secs. (listen/record/type)	0 (melody)
80 4d	FAX extension (4d = 41…48)	Empty
40 4d	Answer phone (4d = 41…48)	Empty
91…94	Default configuration	
56 d…d	Caller identification (CLIP) authorised extension	All
54 d…d	Internal (CLIP) display enabled	All

89 yyyyyyy…	Clock (Day, month, year, hour, minutes, seconds)	
88 x	Print-out type	0 (see Table 4)

99	Reset default configuration	
4* d…d	Access Doorphone 1	

*Key: variable **d** represents the extension number (1…8), variable **nn** represents a table of addresses (00, 01, 02…), variable **x** represents the parameter to be input (0, 1,…), and **yyy**…. represents the value to be input.*

CLOCK INTERFACE

The PBX FORUM™ 100 is equipped with a clock interface and can:
- send a detailed report to the printer of all external calls
- provide an alarm clock function for all extensions.

1 – SETTING THE DATE AND TIME (codes 89 yyy..., 88 x)
The date and time can be set by dialling **98 1234 89 $y_1y_2...y_{12}$ R** (where y_1y_2 = Day, y_3y_4 = Month, y_5y_6 = Year, y_7y_8 = Hour, y_9y_{10} = Minutes, $y_{11}y_{12}$ = Seconds).

The following sequences are used to change the clock from winter to summer time and vice-versa.
- **98 1234 89 * R** puts the clock back one hour
- **98 1234 89 # R** puts the clock forward one hour.

2 – CONNECTING TO A COMPUTER
The PBX FORUM™ 100 can be connected to the serial interface of a PC via a cable, which is included in the box.

Note: *Before connecting the cable to the PC, unplug the PBX from the mains and then slide open the cover.* ***Connect the cable to the PC before closing the PBX and before connecting to the mains and external telephone line.***

3 – TELEPHONE TRAFFIC REPORT
Detailed reports on telephone traffic can be displayed, giving the detailed status for each call and/or call transfer.

This information can only be displayed via a communication programme that can be run on **all versions of Windows**.

To establish a connection between the PBX and the PC, proceed as follows:

- Click on “START”
- Click on “Programs”
- Click on “Accessories”
- Click on “Communication”
- Click on “HyperTerminal”

When you are in the “HyperTerminal” programme menu, set up the programme as follows:

- Select an Icon
- Type a name for the connection
- “Connection information” > Click and select “Com 1”.

Then, specify the following COM 1 properties:

- Baud rate = 9600
- Data Bit = 8
- Parity = none
- Bit stop = 1
- Flow control = Hardware

Confirm your selection by clicking on "OK" and the traffic report display window will appear.

In the same menu, click on "file" then "save file" to save your configuration. The options you selected can then be used.

The next time you use this application, all you need to do is click on the icon you set up at the start of the above procedure.

The PBX can store a detailed report for up to 180 calls.

The call report includes the following data:
Date (day, month, year), Time (hour and minutes), Duration of call (minutes/seconds), Telephone caller (4d), External line, Number called.
This data can also be produced for incoming calls only or for all calls lasting longer than 20 seconds.
The request is made by dialling **98 1234 88 x R** where **x** defines the type of report printout, as described in Table 4 below:

TABLE 4

X	**Signifying**
0	Report deactivated
1	Outgoing calls
3	Outgoing calls >20 seconds only
4	Incoming calls only
5	Incoming & outgoing calls
7	Incoming & outgoing calls >20 seconds

4 – ALARM CLOCK FUNCTION

The alarm clock function triggers a phone call to be made from a telephone extension at the programmed time and repeatedly sends out the voice message "Alarm clock function". The call continues for 50 seconds and any alarm clock call to be made within the next 24 hours must be reprogrammed.

The alarm time to be set is programmed in hours and minutes of the day as follows:
27 hhmm R to program the hour and minutes the alarm call is to be made
27 9hmm R to program the hour and minutes the alarm call is to be made after hmm hours/minutes (9:59 maximum).

Other useful codes:
27 R to deactivate the Alarm clock function
28 R to check the status of the Alarm clock function
29 R to reset the Alarm clock function to the hours and minutes previously programmed
26 R to check the present time
25 R to check the present date and time.

Note: if there is an electrical power failure, the Alarm clock function will not be programmed but the PBX clock will continue to work. If there is a power failure when the Alarm call is programmed to ring, the telephone ringer will not be functioning. If the power supply returns within an hour, the Alarm call will function the moment the power returns.

TECHNICAL CHARACTERISTICS

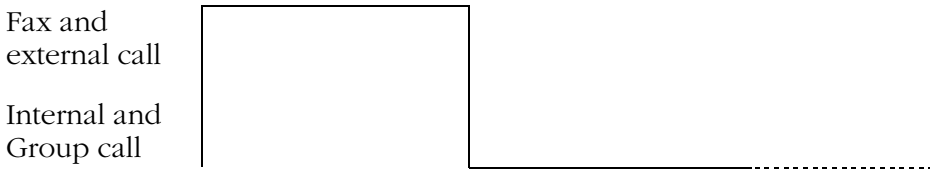
Electrical supply:
From the mains via a wall socket:
Mains voltage: 230 V/240 V – 50 Hz
Maximum power absorption: 100 mA
Voltage received from the transformer:
24 V DC (200 mA)
12 V DC (150 mA).

Internal lines:
Maximum distance between a phone extension and the PBX: 500 m with a twisted pair of telephone cables (0.6 mm in diameter).

External line:
Multifrequency (MF) or pulse-mode (DC) dialling
Calibrated opening: 240 ms

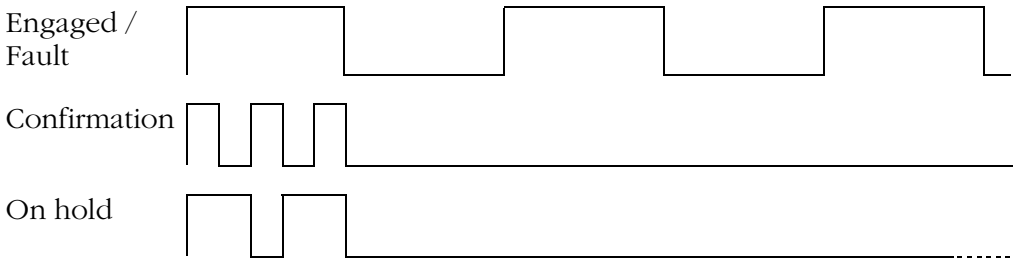
Technical characteristics:
Weight: 400 g
Space required for installing the PBX and transformer: 200 to 300 mm
Operating temperature: 0º - 40º C

Frequency of main ringing tones *(freq. 50 Hz –empty voltage 40 V ac):*



The dotted line indicates a cyclical repetition of the signal.

Frequency of the main dial tones (*freq. = 437 Hz):*



The dotted line indicates a cyclical repetition of the signal.

TROUBLESHOOTING

PROBLEM	**TO CHECK**	**SOLUTION**
The telephone is not functioning correctly.	Replace it with a telephone with the same features.	If the problem persists, failure is at system level. If the problem is resolved, the telephone needs repairing.
Only extension 41 is functioning	Check the system's green light is on.	If the green light is off, there is an electrical supply failure (faulty connection or no connection between PBX & transformer).
Interference during communication. All internal and external communications are interrupted	Check the connections between the PBX & telephones.	Readjust the telephone and PBX side connectors.
The telephone ringer is not working.	Check the telephone ringer is activated. Check if the Night Mode is activated.	Reactivate the ringer, code 81 R. Deactivate the Night function, code 900 R.
External calls (incoming & outgoing) are impossible.	Check the network dial tone.	No tone can be heard: check the system's connection to the PSTN. The tone can be heard: check the equipment is not in DTMF mode on a DC (pulse) line. Switch the equipment to DC (pulse) mode.
The line cuts when starting to dial.	Check if the dialling lock is activated for the extension concerned.	Deactivate the dialling lock (see chapter on Programming extensions)
A quick busy tone can be heard when calling another extension.	Check that two calls are not already being made at the same time.	The system only allows two conversations at one time. Wait a few seconds & then try again.
A rapid engaged tone can be heard when picking up the receiver.		Check to see if two other extensions have picked up the receiver and are in the process of dialling, or if an extension is in communication with the intercom. If so, wait a few seconds & try again.
The R key is not working properly.	The equipment's calibrated opening is not recognised.	Call Belgacom technical assistance on the number below.
To reset the default password: - Turn off the system. Unplug the network cables. - Remove the system's cover. - Put the S1 jumper in position 1-2. - Switch the system back on and press 98 from terminal 41. - Hang up and switch the system off. - Put the S1 jumper back in position 2-3. - Replace the cover and switch the system back on. - The system will have reset the default password.		

If you have any problems installing or using the Forum™ 100, contact our helpdesk at 0903 99 058(EURO 1,12/minute)

FORUM™ 100 PROGRAMMING TABLE

VERSION	Dated			PASSWORD	

LANGUAGE				FLASH IN		OUT	PRINT-OUT TYPE	

(S) DIALLING CODE LOCKING	0	1	2	3	4	5	6	7	8	9

	LINE		FUNCT. ACTV.		OTHER	
DTMF			4-NOTE MELODY			
FAX/DISA SWITCH			FAX/DISA SWITCH			
ANSWER PHONE			PRE DISA			
INCOMING ONLY			ANSW. PHONE MESSAGE			
			NIGHT MODE			
NO ABBREVIATED DIAL CODES			NO DISA MESSAGE			
			WELCOME MESSAGE			

ACTIVATION		41	42	43	44	45	46	47	48
ACTIVATED	Ext. L								
PARTIALLY ACTIVATED	Ext L.								
NIGHT FUNCTION	Ext. L								
DIRECT EXT. ACCESS	Ext. L								
RINGER	Ext. L								
LOCKING									
LOCKING OF 00 DIALLING CODE									
ADDING 3RD-CALLER ACTIVE									
HOT LINE									
FAX									
ANSWER PHONE									
NO NOTICE									
CLI: EXT PRES/SEND		/	/	/	/	/	/	/	/
PRIVATE PRINT-OUT									
INTERCOM									
GROUP 1									
GROUP 2									
GROUP 3									
GROUP 4									
GROUP 5									
GROUP 6									

PHONE DIRECTORY

ABBREVIATED-DIALLING CODE	NUMBER	ABBREVIATED-DIALLING CODE	NUMBER
300		320	
301		321	
302		322	
303		323	
304		324	
305		325	
306		326	
307		327	
308		328	
309		329	
310		330	
311		331	
312		332	
313		333	
314		334	
315		335	
316		336	
317		337	
318		338	
319		339	